Preliminary Syllabus, v.1c

ESCI 323: EARTH STRUCTURE AND DEFORMATION
Spring 2014

Lecture:	MWF 10:00 - 10:50 AM
Lab:	Th 1:00 - 4:00 PM
Professor:	Julia Morgan
TA:	Cliff Yu
Text:	van der Pluijm, B.A., and Marshak, S. (2004) **Earth Structure: An Introduction to Structural Geology and Tectonics** (2nd edition)
Background:	Press, Siever, Grotzinger, and Jordan (2003): **Understanding the Earth**.
Lab Text:	Rowland, S.M., Duebendorfer, E.M., and Schiefelbein, L.M. (2007): **Structural Analysis and Synthesis: A Laboratory Course in Structural Geology** (3rd Edition), Wiley-Blackwell, 320 pp. [ISBN: 978-1-4051-1652-7]
Grading Criteria:	4 Credits: Exams (2) & Quizzes (5 top) - 60%; Participation – 15%; Labs - 25%.

Week	Date	Topic	Text	Lab
Week I	Jan 13	Introduction & Earth Structures	Ch. 1,2	
	Jan 15	Introduction to Plate Tectonics	Ch. 14	
	Jan 17	Introduction to Plate Tectonics		Ch. 1
Week II	Jan 20	***MLK DAY – NO CLASS***		
	Jan 22	Plate Tectonics – Summary		
	Jan 24	**CLASS CANCELLED**		Ch. 2,4
Week III	Jan 27	(QUIZ 1) Plate Tectonics – Sum,		
	Jan 29	Earthquakes & Mechanisms		
	Jan 31	Earthquakes & Mechanisms		Ch. 5
Week IV	Feb 03	Force & Stress	Ch. 3	
	Feb 05	Brittle Deformation	Ch. 6	
	Feb 07	(QUIZ 2) Faults & Fault Rocks	Ch. 8	Ch. 13
Week V	Feb 10	Fault Geometries		
	Feb 12	Deformation & Strain	Ch. 4	
	Feb 14	Deformation & Strain		Ch. 9
Week VI	Feb 17	Rheology	Ch. 5	
	Feb 19	(QUIZ 3) Rheology		
	Feb 21	Rheology		Ch. 12
Week VII	Feb 24	Folds & Classification	Ch. 10	
	Feb 26	Folding Mechanisms		
	Feb 28	EXAM #1 (19 LECTURES)		Ch. 6,7
Week VIII	Mar 03	***SPRING BREAK – NO CLASS***		
	Mar 05	***SPRING BREAK – NO CLASS***		
	Mar 07	***SPRING BREAK – NO CLASS***		***NO LAB***
Week IX	Mar 10	Ductile Deform Mechanisms	Ch. 9	
	Mar 12	Ductile Deform Mechanisms		
	Mar 14	Ductile Deform Mechanisms		Ch. 6,7
Week X	Mar 17	Defm Microstruct. & Mech Maps		
	Mar 19	(QUIZ 4) Fabrics & Classification	Ch. 11	
	Mar 21	** CLASS CANCELLED **		Ch. 14
Week XI	Mar 24	Fabrics & Ductile Shear Zones	Ch. 12	
	Mar 26	Ductile Shear Zones		
	Mar 28	Defm, Metamorph & Time	Ch. 13	Ch. 16

Any student with a disability requiring accommodations in this class is encouraged to contact me after class. Additionally, students should contact the Disabled Student Services office in the Ley Student Center.

Week XII	Mar 31	(QUIZ 5) Extensional Tectonics	Ch. 16	
	Apr 02	Rift Systems		
	Apr 04	***SPRING RECESS – NO CLASS***		***NO LAB***
Week XIII	Apr 07	Mid Ocean Ridges		
	Apr 09	Convergent Tectonics	Ch. 17	
	Apr 11	Convergent Tectonics		Rift Bathymetry
Week XIV	Apr 14	(QUIZ 6) Collision	Ch. 18	
	Apr 16	Post-Orogenic Collapse		
	Apr 18	Indentor Tectonics		GOC Seismic
Week XV	Apr 21	Strike-slip Tectonics	Ch. 19	
	Apr 23	Strike-slip Tectonics		
	Apr 25	EXAM #2 (19 LECTURES)		Converg. margins

Any student with a disability requiring accommodations in this class is encouraged to contact me after class. Additionally, students should contact the Disabled Student Services office in the Ley Student Center.